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EXAMINER
CHANKONG, DOHM

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	09/886,071	TOPFL ET AL.
	Examiner	Art Unit	
	DOHM CHANKONG	2452	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 September 2009*.
2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,6,11,16 and 20* is/are pending in the application.
  4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1, 6, 11, 16, and 20* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a)☐ All   b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This non-final action is in response to Applicant's request for continued examination.

Claims 1, 6, 11, and 16 are amended. Claim 21 is added. Claims 2-5, 7-10, 12-15, and 17-20

were previously canceled. Accordingly, claims 1, 6, 11, 16, and 21 are presented for further

examination.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 9/10/2009 has been entered.

Allowable Subject Matter

Claims 1 and 20 would be allowable if rewritten or amended to overcome the rejection(s)

under 35 U.S.C. 112, 1st paragraph, set forth in this Office action.

Response to Arguments

Applicant's arguments with respect to claims 6, 11, 16, and 21 have been considered but

are not persuasive. The examiner first notes that these claims lack the limitation of a data

collection module that track sequences of navigational events of both the single authenticated

and unauthenticated users. Claim 1 is indicated as allowable because of the combination of the features including this limitation that is missing from claims 6, 11, 16, and 21.

As to the other new feature, Horvitz discloses disclose calculating a second probability based on selection data of at least one link from a plurality of users, the probability used to determine a likelihood that another user will select the link, such that in response to the probability meeting a threshold, data related to the link is retrieved prior to the another user selecting the link. Specifically, Horvitz discloses calculating a probability based on a selection data of a link from a community of users [column 27 «lines 13-18 and 28-36»].

Horvitz further discloses determining whether the calculated probability meets a threshold and prefetching the link if the probability does meet the threshold [column 26 «lines 45-54» | column 27 «lines 28-40»]. Based on these citations, Applicant's limitation does not patentably distinguish claims 6, 11, and 16 from the cited references. Therefore, the rejections for claims 6, 11, and 16 as set forth in the previous action are maintained.

Moreover, Horvitz discloses storing the user model (which is the module that collects successive actions of a single particular user on a user-specific basis) at either the client or server [column 9 «line 67» to column 10 «line 2»]. This citation meets the claim of a data module that stores actions at a server device.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 6, 11, and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The independent claims recite "registered" and "unregistered" users. Applicant's specification does not provide any written description for this term. There is no description of distinguishing between "registered" and "unregistered" users. The specification only distinguishes between users that have logged into a website and unauthenticated users. Applicant should amend the limitations to recite "authenticated" or "unauthenticated" to make the claims more commensurate with the description found in the specification.

For purposes of writing this action, the terms "registered" and "unregistered" are ignored from the claim interpretation because they are not properly supported by the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

I. CLAIMS 1, 6, 11, AND 16 ARE REJECTED UNDER 35 U.S.C §103(A) AS BEING
UNPATENTABLE OVER HORVITZ, U.S PATENT NO. 6.182.133, IN VIEW OF TAKAGI ET AL,
U.S PATENT NO. 5.881.231 ["TAKAGI"], IN FURTHER VIEW OF BARRETT ET AL, U.S
PATENT NO. 5.727.129 ["BARRETT"] IN FURTHER VIEW OF MALKIN ET AL, U.S.
PATENT NO. 6.085.193 ["MALKIN"].

Claims 6, 11, and 16

As to claim 16, Horvitz discloses a first network for facilitating communication between

a user and a network of information items, comprising:

a remote data storage device for storing the information items, wherein the

information items are stored in the form of pages, and wherein the pages contain a plurality of

links to other information items [column 47 «lines 9-34» where : Horvitz's web server

corresponds to a remote data storage device];

a multi-layer architecture comprising:

a client device having a user interface program thereon, for allowing a user to

interface with the network and request the information items [column 8 «lines 16-59»];

a server device, in communication with the client device and in communication

with the remote storage device, for handling information requests from multiple clients

and for storing information retrieved from the data storage devices locally in a server

cache memory [column 26 «lines 30-44» where : Horvitz's proxy server corresponds to
the claimed server device];

a data collection module for collecting and storing, at the server device, successive
actions of a single particular authenticated user [Figure 6 | column 9 «line 67» to column 10 «line
2»: storing the user model at the server | column 24 «line 43» to column 25 «line 30» | column
27 «lines 18-20» where : prefetching is based on user models that rely upon, in part, current and
prior interaction of the user and recent sequences of pages downloaded to a user] on a user
specific basis [column 47 «lines 56-66»];

a probability module in communication with the data collection module for calculating a
probability for the desirability of the links based on the action of the single particular user
[Figure 6 | Figure 16 «items 1610, 1615» | column 27 «lines 18-20] and for comparing the
probability to a predetermined threshold value associated with a level of risk of retrieving data
that may not be used to identify predicted links [column 4 «line 63» to column 5 «line 18» : see
response to arguments above for analysis comparing Horvitz's rate of refinement to the claimed
level of risk] and for retrieving the predicted information items associated with the links from the
remote data storage devices [column 4 «lines 30-36»] and enabling the storage of the predicted
information on both the client device layer and the server device layer of the multi-layer
architecture in advance of the single particular user's request for the selected information items
[column 4 «lines 20-47» | column 26 «lines 30-44»], the probability module further configured
to:

update the probabilities assigned to the links with each successive user activity

[column 4 «lines 4-12» | column 9 «lines 59-62» where : the user model reflects the

probabilities of pages that may be prefetched];

abort retrieving the predicted information items [column 4 «lines 50-62» | column

5 «lines 11-18»];

continue retrieving the predicted information items from the remote data storage

devices and storing the predicted information items in the server cache memory if the

user requests the predicted information item [column 41 «lines 25-41»];

download the user requested information item to the client from the server cache

memory [column 26 «lines 30-44»];

wherein the probability is calculated based solely on the actions of the single particular

user and not as a member of a larger set of users [column 27 «lines 18-20» | column 41 «lines

44-67»],

wherein the probability module is further configured to calculate a second probability, the

second probability being based on selection data of at least one link from a plurality of

unregistered users [column 27 «lines 13-18 and 28-36»], the probability being used to determine

a likelihood that another user will select the at least one link, such that in response to the

probability meeting a predetermined threshold, data related to the link will be retrieved prior to

the another user selecting the link [column 26 «lines 45-54» | column 27 «lines 28-40»].

Horvitz does not teach a single particular user that is authenticated and that distinguishes

between a specific registered and unregistered users or the feature of aborting retrieval of

predicted items if the user requests an information item other than the predicted information

items. In the same field of invention, Takagi is directed towards a system for prefetching

information [abstract]. Takagi further discloses first authenticating a user before collecting user

actions [column 9 «lines 61-64»]. Authenticating a user effectively distinguishes between a

specific registered (users that are authenticated) and unregistered users (users that are not

authenticated). It would have been obvious to one of ordinary skill in art to modify Horvitz to

include Takagi's user authentication feature. Takagi teaches that such a feature is beneficial to a

prefetching system because it prevents user information from being leaked to other users [see

Takagi, column 9 «lines 64-66»].

   Further, Horvitz teaches aborting retrieval of predicted items but does not base the

aborting feature on a user action. Barrett teaches a network data communication system wherein

a probability module aborts the retrieval of predicted information items if the user requests an

information item other than the predicted information items [abstract | Figure 7 <items 58, 64> |

column 9 <lines 1-16>]. It would have been obvious to one of ordinary skill in the art at the time

the invention was made to implement the functionality of module-initiated abortion of the

retrieval of predicted information items in Horvitz's system. One would have been motivated to

do this implementation to prevent unnecessary downloading of unwanted content in Horvitz's

system based on a user action.

   Finally, Horvitz does not teach a threshold value that is associated with a hardware cost

of cache memory. Malkin teaches determining a threshold value based on the cost of cache

availability [column 19 «line 61» to column 20 «line 5»: prefetching based on cache size and

access cost to adding additional cache memory to the system where the cache size reads on the

hardware cost]. It would have been obvious to one of ordinary skill in the art to have modified Horvitz's prefetch system to include Malkin's teachings. Such a modification is an example of using a known technique [Malkin's cache cost to determine prefetching] to improve similar devices (methods, or products) [Horvtiz's prefetch system] in the same way [adding the cache cost factor in Horvitz's calculus for prefetching links].

As to claims 11 and 16, as they do not teach or further define over the previously claimed limitations, they are similarly rejected for at least the same reasons set forth for claim 6.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOHM CHANKONG whose telephone number is (571)272-3942. The examiner can normally be reached on Monday-Friday [8:30 AM to 4:30 PM].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thu Nguyen can be reached on (571)272-6967. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dohm Chankong/
Primary Examiner, Art Unit 2452